REMARKS

With this amendment, claims 1-3, 5-11, 13-14, 16-18, and 21-22 are now cancelled, claims 4, 12, 15, and 19 are amended, and new claims 23 and 24 are added, such that claims 4, 12, 15, 19-20, and 23-24 are pending. Claims 23 and 24 are method claims which correspond to prior claims 18 and 20 respectively. Reconsideration and review of the pending claims are respectfully requested.

The claims were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The amended claims overcome this rejection, as specifically described below.

With respect to the Examiner's objection to the term "a sensitivity selector", the claims are amended to define a sensitivity selector as a device for determining a desired steering sensitivity setting, which is a desired steering response to a given operator input to a steering input device. This is described in paragraphs 15 and 34 of the present application.

With respect to the Examiner's objections to coarse mode, fine mode, or automatic mode, these limitations are not in the pending claims, and in any event, it is clear that these different modes refer to different levels or settings of desired steering sensitivity, as described in paragraph 34.

With respect to the Examiner's objection to the word "maximum", claims 12 and 19 are amended to include the word "allowable" such that the recited phrase is now "maximum allowable articulation angle". Paragraph 33 of the present application describes the maximum allowable articulation angle as the largest angle between the front frame and the rear frame before the tires contact each other.

With respect to the Examiner's objection to the phrase "is the same for different types of steering" in claim 20, it should be noted that the entire phrase is "wherein the interface is the same for different types of steering input devices". This means that the interface is the same regardless of what type of steering input device is used, i.e., whether the steering input device

is a steering wheel or a joystick or whatever, as described in paragraphs 29 and 45 of the application.

With respect to the Examiner's objection to the phrase "priority of flow", claim 24 recites giving priority to flow from the source of hydraulic fluid to the steering valve over flow from the source of hydraulic fluid to the at least one other solenoid valve. This is described in paragraph 22 of the present application which states that steering is given priority over other functions, meaning that if a steering input signal is received by the processor but one or more of the other valves are using up all of the available flow or pressure of the system pump, the processor can close, proportionally or totally, one or more of the other valves to divert flow to the steering valve.

Claims 2-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,039,133 to Zulu in view of U.S. Pat. No. 6,863,144 to Brandt et al.

With respect to claim 4, this claim defines a steering system for an articulated vehicle including, among other things, a sensitivity selector for determining a desired steering sensitivity setting, which is a desired steering response to a given operator input to the steering input device, the sensitivity selector being communicatively connected to the processor to provide an input signal to the processor that causes the processor to vary the signal output to the valve in accordance with the input signal from the sensitivity selector, wherein the setting of the sensitivity selector is determined by what gear the vehicle is in. Zulu and/or Brandt et al. fail to describe or suggest this limitation.

Zulu simply does not include a sensitivity selector for determining a desired steering sensitivity setting. The articulated angle sensor 79 of Zulu cannot be considered a sensitivity selector, but instead is a sensor that measures the "actual angle of articulation between the from frame structure 12 and the rear frame structure 14", such as described at col. 5, lines 34-37.

The Examiner states that Brandt et al. discloses a steering system for a work vehicle wherein a setting of a sensitivity selector is determined by

what gear the vehicle is in. Applicants disagree and fail to find any discussion in Brandt et al. concerning a gear that the vehicle is in having any effect on the sensitivity of the steering. Applicants request that the Examiner point out with specificity where this limitation is disclosed in Brandt. Thus it is believed that Brandt et al. does not disclose a steering control system wherein a steering sensitivity setting is determined by what gear the vehicle is in, such that claim 4 defines over Brandt et al. and Zulu, either alone or in combination.

With respect to claims 12 and 15, these claims now define a steering control system for an articulated vehicle including, among other things, a sensitivity selector for determining a desired steering sensitivity setting, which is a desired steering response to a given operator input to the steering input device, the sensitivity selector being communicatively connected to the processor to provide an input signal to the processor that causes the processor to vary the signal output to the valve in accordance therewith, wherein the setting of the sensitivity selector is determined directly by an operator, and an operator input device is communicatively connected to the processor for allowing an operator to input a tire size, wherein the processor determines a maximum allowable articulation angle between the first frame and the second frame based on the tire size input by the operator, and wherein the processor controls the valve to prevent articulation of the first frame and the second frame past the maximum allowable articulation angle.

The Examiner states that Zulu discloses these limitations in the abstract and Figs. 1 and 2. Applicants disagree and fail to find any discussion in Zulu relating to a steering system including an operator input device communicatively connected to the processor for allowing an operator to input a tire size. Further, Applicants fail to find any discussion regarding a maximum allowable articulation angle determined based on a tire size input. Zulu discloses a threshold angle of articulation and a predetermined maximum angle of articulation, but does not disclose or suggest that these angles are determined by a processor based on a tire size input. Zulu

simply does not disclose or suggest how the predetermined maximum angle is determined. Applicants request that the Examiner point out with specificity where these limitations are disclosed in Zulu.

Brandt et al. fails to correct for the deficiencies of Zulu in this regard, and thus it is believed that claims 12 and 15 define over these references, either alone or in combination.

With respect to claim 19, this claim defines a steering system for an articulated vehicle including, among other things, a processor which controls a valve so as not to exceed a maximum allowable articulation angle between the first and second frames which maximum allowable articulation angle the processor sets based on the tire size input by the operator. As explained above, both Zulu and Brandt et al. fail to disclose a tire size being inputted by an operator, and a maximum allowable articulation angle being determined by the tire size. Thus claim 19 also defines over these references either alone or in combination.

With respect to claim 20, this claim defines a steering system for an articulated vehicle, including, among other things, an interface operatively connecting the steering input device to the processor, wherein the processor operates the proportional solenoid valve in response to inputs from the steering input device, and wherein the interface is the same for different types of steering input devices.

Both Zulu and Brandt et al. fail to disclose or suggest that an interface operatively connecting a steering input device to a processor may be the same for different types of steering input devices. Zulu discloses that the "manual steering actuator 53 includes a position sensor 55 operatively coupled to a control handle 56", but does not disclose or suggest that any other type of steering input device would operate with the manual steering actuator 53 and position sensor 55. Similarly, Brandt et al. merely discloses a single type of steering input device, namely, a joystick having a variety of features. Applicants request that the Examiner point out with specificity where this limitation is disclosed in either reference.

With respect to claim 23, this claim defines a method for steering an articulated vehicle including the steps of producing steering signals in response to mechanical steering inputs from an operator, communicating the steering signals to a processor, and controlling the valve in response to the steering signals to align axes of the first frame and the second frame to be generally parallel from a generally non-parallel position when the steering input device is returned to a center position.

The Examiner, with reference to claim 18, states that Zulu describes a system having a processor 48 that "controls the valve to align axis of the first frame 12 and second frame 14 to be generally parallel from a generally non-parallel position when the steering input device is returned to a center position". Applicants disagree. The Zulu reference merely discloses that when the operator positions the control handle so as to direct the work machine in a straight direction, which means that the axes of the two frames are already parallel, the processor will not generate control signals so that the work vehicle continues in a straight direction.

Brandt et al. fails to correct for the deficiencies of Zulu in this regard, such that claim 23 defines over these references, either alone or in combination.

With respect to new claim 24, this claim defines a method for steering an articulated vehicle including the steps of producing steering signals in response to mechanical steering inputs from an operator, communicating the steering signals to a processor, and controlling the steering valve in response to inputs from the steering input device, and giving priority to flow from the source of hydraulic fluid to the steering valve over flow from the source of hydraulic fluid to the at least one other solenoid valve.

The Examiner, with reference to claim 21, states that Zulu describes a system having a processor, "wherein the processor 48 gives priority of flow from the source of hydraulic fluid to the steering valve (col. 5&6)". Applicants disagree. Both Zulu and Brandt et al. fail to disclose or suggest that a processor gives priority to flow to a steering valve over another

solenoid valve. Priority of the steering valve for flow purposes is simply not discussed in these references.

With respect to the Examiner's objection to the claims under MPEP 2114, it is believed that all pending system claims include structural limitations that are not described or suggested in the prior art references. Claim 4 includes a sensitivity selector including a gear selector sensor which is communicatively connected to a processor. Claims 12 and 15 include an operator input device for allowing an operator to input a tire size, and claim 19 includes a similar limitation. Claim 20 includes an interface operatively connecting the steering input device to the processor, which is the same for different types of steering devices.

In light of the above, it is believed that the pending claims are in condition for allowance.

Although no additional fees are believed due for filing this amendment, if an additional fee is deemed to be due, please charge any such fee to Deposit Account No. 17-0055.

Respectfully submitted,

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